

CLAIMS

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1. A glass printing ink or glass printing lacquer comprising at least two resins, which together yield a photo-hardenable mixture, and at least one photoinitiator,
5 characterised in that one of the resins comprises a bisphenol A based epoxy resin, diluted in a UV hardening monomer, and the at least one other resin comprises a resin which comprises free functional amino, hydroxy, epoxy, acid, acid
10 anhydride and/or acrylate groups.
2. A glass printing ink or glass printing lacquer according to claim 1,
characterised in that
15 the bisphenol A based epoxy resin exhibits a weight average molecular weight in the range from 800 to 1500.
3. A glass printing ink or glass printing lacquer according to claim 1 or claim 2,
20 characterised in that the at least one other resin comprises a melamine acrylate, an acid-modified polyester acrylate and/or an epoxy acrylate.

4. A glass printing ink or glass printing lacquer according to any one of claims 1 to 3, characterised in that

the epoxy resin is used in a quantity of 1 to 90 wt.%,

5 preferably of 5 to 20 wt.% and in particular of 11 to 14 wt.% dry weight, relative to the weight of the glass printing ink or of the glass printing lacquer.

5. A glass printing ink or glass printing lacquer

10 according to any one of claims 1 to 4,

characterised in that

the at least one other resin is used in a quantity of 5 to 90 wt.%, preferably of 5 to 40 wt.% and in particular of 10 to 30 wt.% dry weight, relative to the weight of

15 the glass printing ink or of the glass printing lacquer.

6. A glass printing ink or glass printing lacquer

according to any one of claims 1 to 5,

characterised in that

20 the photoinitiator(s) is/are present in a total quantity of 1 to 12 wt.%, in particular of 3 to 7 wt.%, relative to the weight of the glass printing ink or of the glass printing lacquer.

25 7. A glass printing ink or glass printing lacquer

according to any one of claims 1 to 6

characterised in that

the UV hardening monomer is hexanediol diacrylate.

8. A glass printing ink or glass printing lacquer according to any one of claims 1 to 7, characterised in that it further contains a UV hardening reactive diluent other than the UV hardening monomer.
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9. A glass printing ink or glass printing lacquer according to any one of claims 1 to 8, characterised in that
10 it further contains a stabiliser.
10. A glass printing ink or glass printing lacquer according to any one of claims 1 to 9, characterised in that
15 it further contains a co-initiator.
11. A glass printing ink according to any one of claims 1 to 10, characterised in that
20 it contains one or more pigments or dyes in a quantity of 0.5 to 50 wt.%, relative to the total weight of the ink.
12. Use of a glass printing ink or of a glass printing lacquer according to any one of claims 1 to 11 for printing a glass or at least superficially vitreous substrate.
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13. Use according to claim 12,
characterised in that
the glass or vitreous substrate is selected from among
glass, ceramics and tiles.

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14. A method for printing a glass or at least
superficially vitreous substrate with a glass
printing ink or a glass printing lacquer according
to any one of claims 1 to 11, comprising the steps:

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- a) pretreating the glass or vitreous substrate;
- b) printing the glass or vitreous substrate with a glass printing ink or a glass printing lacquer according to any one of claims 1 to 11, wherein a coupling agent is mixed into the glass printing ink or the glass printing lacquer before printing, and
- c) hardening the glass printing ink or the glass printing lacquer with UV radiation; wherein no subsequent heat treatment is performed.

15. A method for printing a glass or at least superficially vitreous substrate with a glass printing ink or a glass printing lacquer according to any one of claims 1 to 11, comprising the steps:

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- (a) printing the glass or vitreous substrate with the glass printing ink or the glass printing lacquer without using a coupling agent;
- 10 (c) hardening the glass printing ink or the glass printing lacquer with UV radiation; and optionally
- (d) thermally post-treating the printed glass or vitreous substrate at a temperature of

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130°C to 170°C for 20 to 40 minutes.